بسم الله الرحمن الرحيم

عنوان المحاضرة: Bladder function & Voiding dysfunction

تاريخ المحاضرة : 25/8/2013- 1/9/2013

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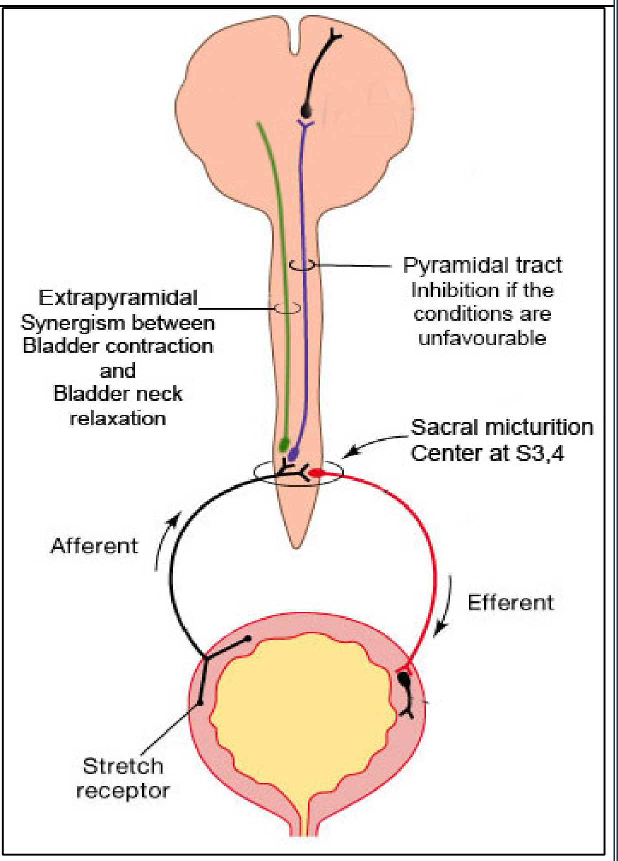
Physiology of micturition:


Pyramidal tract
Inhibition if the conditions are unfavourable
Extrapyramidal
Synergism between Bladder contraction and Bladder neck relaxation
Sacral micturition Center at S3,4
Afferent
Efferent
Stretch receptor

-Bladder distention → afferent to micturition center → efferent to bladder → Reflex micturition

(Automatic bladder in children)

-With development of pyramidal tract it sends **inhibition** signals to the micturition center to prevent micturition if the conditions are unfavorable

-The role of extrapyramidal tract is the **synergism** between the contraction of bladder wall and the relaxation of the bladder neck

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-In Parkinsonism patient, the extrapyramidal system is affected → dyssynergia (contraction of both bladder & bladder neck at the same time) →
Obstruction & retention

-In paraplegic patient, the inhibition of the pyramidal tract is lost → the bladder goes back to be Automatic

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Neurogenic Bladder:

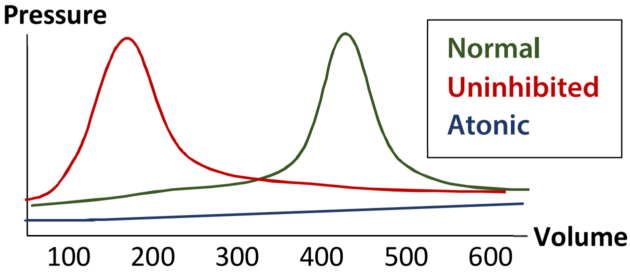
Types:

1-**Sensory atonic bladder:** d.t. cut of the afferent

2-**Motor atonic bladder:** d.t. cut of the efferent

3-**Hyperactive** (automatic / uninhibited): d.t. Δ lesion

-Differentiate between these types by the use of *Urodynamic Cystometry* →



-Urethral pressure profile is used to diagnose case of **Parkinsonism** (High pressure) or **Stress continence** in women & Enuresis in children (Low)

-**Alpha** adrenergic receptors are present mainly in the **bladder neck** and their stimulation leads to contraction of the bladder neck, while the adrenergic receptors in the bladder wall is mainly beta and their stimulation on the contrary leads to relaxation of the bladder

-So, in treatment of cases of stress incontinence, use α agonists for the neck (+beta agonist to ↓ contraction of the wall), while in Parkinsonism use α blockers to relax the bladder neck

Complications of Neurogenic bladder:

Stasis → Infection → Stone Formation → Obstruction → Renal failure